

25.Engine Trouble in General

A: INSPECTION

NOTE:

“RANK” shown in the chart refers to the possibility of the cause of trouble in order “Very often” to “Rarely”

A — Very often

B — Sometimes

C — Rarely

| Symptom | Problem parts etc. | Possible cause | RANK |
|---------------------------------------|---|---|------|
| 1. Engine does not start. | | | |
| 1) Starter does not turn. | Starter | Defective battery-to-starter harness | B |
| | | Defective starter switch | C |
| | | Defective inhibitor switch or neutral switch | C |
| | | Defective starter | B |
| | Battery | Improper connection of terminal | A |
| | | Run-down battery | A |
| | | Defective charging system | B |
| | Friction | Seizure of crankshaft and connecting rod bearing | C |
| | | Seized camshaft | C |
| | | Seized or stuck piston and cylinder | C |
| 2) Initial combustion does not occur. | Starter | Defective starter | C |
| | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A |
| | Fuel line | Defective fuel pump and relay | A |
| | | Lack of or insufficient fuel | B |
| | Belt | Trouble | B |
| | | Defective timing | B |
| | Compression | Incorrect valve clearance | C |
| | | Loosened spark plug or defective gasket | C |
| | | Loosened cylinder head bolt or defective gasket | C |
| | | Improper valve sealing | C |
| | | Defective valve stem | C |
| | | Worn or broken valve spring | B |
| | | Worn or stuck piston rings, cylinder and piston | C |
| | | Incorrect valve timing | B |
| | | Improper engine oil (low viscosity) | B |
| | 3) Initial combustion occurs. | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | |
| Intake system | | Defective intake manifold gasket | B |
| | | Defective throttle body gasket | B |
| Fuel line | | Defective fuel pump and relay | C |
| | | Clogged fuel line | C |
| | | Lack of or insufficient fuel | B |
| Belt | | Trouble | B |
| | | Defective timing | B |
| Compression | | Incorrect valve clearance | C |
| | | Loosened spark plug or defective gasket | C |
| | | Loosened cylinder head bolt or defective gasket | C |
| | | Improper valve sealing | C |
| | | Defective valve stem | C |
| | | Worn or broken valve spring | B |
| | | Worn or stuck piston rings, cylinder and piston | C |
| | | Incorrect valve timing | B |
| Improper engine oil (low viscosity) | | B | |

Engine Trouble in General

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| Symptom | Problem parts etc. | Possible cause | RANK |
|--|---|---|------|
| 4) Engine stalls after initial combustion. | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A |
| | Intake system | Loosened or cracked intake duct | B |
| | | Loosened or cracked PCV hose | C |
| | | Loosened or cracked vacuum hose | C |
| | | Defective intake manifold gasket | B |
| | | Defective throttle body gasket | B |
| | | Dirty air cleaner element | C |
| | Fuel line | Clogged fuel line | C |
| | | Lack of or insufficient fuel | B |
| | Belt | Trouble | B |
| | | Defective timing | B |
| | Compression | Incorrect valve clearance | C |
| | | Loosened spark plug or defective gasket | C |
| | | Loosened cylinder head bolt or defective gasket | C |
| | | Improper valve sealing | C |
| | | Defective valve stem | C |
| | | Worn or broken valve spring | B |
| | | Worn or stuck piston rings, cylinder and piston | C |
| Incorrect valve timing | | B | |
| Improper engine oil (low viscosity) | B | | |
| 2. Rough idle and engine stall | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A |
| | Intake system | Loosened or cracked intake duct | A |
| | | Loosened or cracked PCV hose | A |
| | | Loosened or cracked vacuum hose | A |
| | | Defective intake manifold gasket | B |
| | | Defective throttle body gasket | B |
| | | Defective PCV valve | C |
| | | Loosened oil filler cap | B |
| | | Dirty air cleaner element | C |
| | Fuel line | Defective fuel pump and relay | C |
| | | Clogged fuel line | C |
| | | Lack of or insufficient fuel | B |
| | Belt | Defective timing | C |
| | Compression | Incorrect valve clearance | B |
| | | Loosened spark plug or defective gasket | B |
| | | Loosened cylinder head bolt or defective gasket | B |
| | | Improper valve sealing | B |
| | | Defective valve stem | C |
| | | Worn or broken valve spring | B |
| | | Worn or stuck piston rings, cylinder and piston | B |
| | | Incorrect valve timing | A |
| | Improper engine oil (low viscosity) | B | |
| | Lubrication system | Incorrect oil pressure | B |
| | | Defective rocker cover gasket | C |
| | Cooling system | Over-heating | C |
| | Others | Evaporative emission control system malfunction | A |
| | | Stuck or damaged throttle valve | B |

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| Symptom | Problem parts etc. | Possible cause | RANK |
|---|---|---|------|
| 3. Low output, hesitation and poor acceleration | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A |
| | Intake system | Loosened or cracked intake duct | A |
| | | Loosened or cracked PCV hose | A |
| | | Loosened or cracked vacuum hose | B |
| | | Defective intake manifold gasket | B |
| | | Defective throttle body gasket | B |
| | | Defective PCV valve | B |
| | | Loosened oil filler cap | B |
| | | Dirty air cleaner element | A |
| | Fuel line | Defective fuel pump and relay | B |
| | | Clogged fuel line | B |
| | | Lack of or insufficient fuel | C |
| | Belt | Defective timing | B |
| | Compression | Incorrect valve clearance | B |
| | | Loosened spark plug or defective gasket | B |
| | | Loosened cylinder head bolt or defective gasket | B |
| | | Improper valve sealing | B |
| | | Defective valve stem | C |
| | | Worn or broken valve spring | B |
| | | Worn or stuck piston rings, cylinder and piston | C |
| | | Incorrect valve timing | A |
| | Improper engine oil (low viscosity) | B | |
| | Lubrication system | Incorrect oil pressure | B |
| Cooling system | Over-heating | C | |
| | Over-cooling | C | |
| Others | Evaporative emission control system malfunction | A | |
| 4. Surging | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A |
| | Intake system | Loosened or cracked intake duct | A |
| | | Loosened or cracked PCV hose | A |
| | | Loosened or cracked vacuum hose | A |
| | | Defective intake manifold gasket | B |
| | | Defective throttle body gasket | B |
| | | Defective PCV valve | B |
| | | Loosened oil filler cap | B |
| | | Dirty air cleaner element | B |
| | Fuel line | Defective fuel pump and relay | B |
| | | Clogged fuel line | B |
| | | Lack of or insufficient fuel | C |
| | Belt | Defective timing | B |
| | Compression | Incorrect valve clearance | B |
| | | Loosened spark plug or defective gasket | C |
| | | Loosened cylinder head bolt or defective gasket | C |
| | | Improper valve sealing | C |
| | | Defective valve stem | C |
| | | Worn or broken valve spring | C |
| | | Worn or stuck piston rings, cylinder and piston | C |
| | | Incorrect valve timing | A |
| | Improper engine oil (low viscosity) | B | |
| | Cooling system | Over-heating | B |
| Others | Evaporative emission control system malfunction | C | |

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| Symptom | Problem parts etc. | Possible cause | RANK |
|-------------------------------------|---|--|------|
| 5. Engine does not return to idle. | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A |
| | Intake system | Loosened or cracked vacuum hose | A |
| | Others | Stuck or damaged throttle valve | A |
| 6. Dieseling (Run-on) | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A |
| | Cooling system | Over-heating | B |
| | Others | Evaporative emission control system malfunction | B |
| 7. After burning in exhaust system | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A |
| | Intake system | Loosened or cracked intake duct | C |
| | | Loosened or cracked PCV hose | C |
| | | Loosened or cracked vacuum hose | B |
| | | Defective PCV valve | B |
| | | Loosened oil filler cap | C |
| | Belt | Defective timing | B |
| | Compression | Incorrect valve clearance | B |
| | | Loosened spark plug or defective gasket | C |
| | | Loosened cylinder head bolt or defective gasket | C |
| | | Improper valve sealing | B |
| | | Defective valve stem | C |
| | | Worn or broken valve spring | C |
| | | Worn or stuck piston rings, cylinder and piston | C |
| | Incorrect valve timing | A | |
| Lubrication system | Incorrect oil pressure | C | |
| Cooling system | Over-cooling | C | |
| Others | Evaporative emission control system malfunction | C | |
| 8. Knocking | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A |
| | Intake system | Loosened oil filler cap | B |
| | Belt | Defective timing | B |
| | Compression | Incorrect valve clearance | C |
| | | Incorrect valve timing | B |
| | Cooling system | Over-heating | A |
| 9. Excessive engine oil consumption | Intake system | Loosened or cracked PCV hose | A |
| | | Defective PCV valve | B |
| | | Loosened oil filler cap | C |
| | Compression | Defective valve stem | A |
| | | Worn or stuck piston rings, cylinder and piston | A |
| | Lubrication system | Loosened oil pump attaching bolts and defective gasket | B |
| | | Defective oil filter O-ring | B |
| | | Defective crankshaft oil seal | B |
| | | Defective rocker cover gasket | B |
| | | Loosened oil drain plug or defective gasket | B |
| | Loosened oil pan fitting bolts or defective oil pan | B | |

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| Symptom | Problem parts etc. | Possible cause | RANK | |
|--------------------------------|---|---|------|---|
| 10. Excessive fuel consumption | Engine control system <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> | | A | |
| | Intake system | Dirty air cleaner element | A | |
| | Belt | Defective timing | B | |
| | Compression | Incorrect valve clearance | | B |
| | | Loosened spark plug or defective gasket | | C |
| | | Loosened cylinder head bolt or defective gasket | | C |
| | | Improper valve sealing | | B |
| | | Defective valve stem | | C |
| | | Worn or broken valve spring | | C |
| | | Worn or stuck piston rings, cylinder and piston | | B |
| | | Incorrect valve timing | | B |
| | Lubrication system | Incorrect oil pressure | C | |
| | Cooling system | Over-cooling | C | |